

RECEIVED
CENTRAL FAX CENTER
SEP 13 2007

Listing of Claims

This listing of claims will replace all prior versions, and listings, of the claims in this application.

Claim 1 (currently amended): A method of minimizing detectability of an electronically communicated message, comprising:

establishing a nominal transmission frequency;

establishing a dwell period;

defining a predetermined frequency modulation pattern about the nominal transmission frequency, the predetermined frequency modulation pattern being suitable to vary the nominal transmission frequency during the dwell period;

dividing the dwell period into a plurality of sub-dwell periods, where each sub-dwell period has a nominal sub-frequency assigned thereto according to the predetermined frequency modulation pattern;

randomly ordering the plurality of sub-dwell periods and the respective assigned nominal sub-frequencies; and

transmitting the message according to the random ordering of the nominal sub-frequencies;

for each randomly ordered nominal sub-frequency, varying the nominal sub-frequency during the respective sub-dwell period by one of increasing and decreasing the nominal sub-frequency; and

transmitting the message at frequencies by which each randomly ordered nominal sub-frequency has been increased or decreased.

Claim 2 (canceled)

Claim 3 (currently amended): The method of claim [[2]] 1, further including:

increasing a time that the transmitted frequency transitions, while still transmitting, from one randomly ordered nominal sub-frequency to a next randomly ordered nominal sub-frequency.

Claim ²~~4~~ (previously presented): The method of claim 1, further including applying a band-limiting filter to each randomly ordered nominal sub-frequency.

Claim ³~~5~~ (original): The method of claim 1, wherein the nominal transmission frequency is one of a plurality of frequency hops of a frequency hopping strategy, and wherein the dwell period is an amount of time the frequency hopping algorithm is configured to maintain the one of the plurality of frequency hops.

Claim ⁴~~6~~ (original): The method of claim 1, wherein the random ordering of the nominal sub-frequencies is performed using a pseudo-random number generator.

Claim ⁵~~7~~ (original): The method of claim 1, wherein the predetermined frequency modulation pattern is a frequency jitter pattern that includes at least one of a frequency increase and a frequency decrease during the dwell period.

Claim ⁶~~8~~ (original): The method of claim 1, wherein the predetermined frequency modulation pattern is a frequency chirp characterized by one of an increase and a decrease in frequency during the dwell period.

Claim ⁷~~9~~ (previously presented): A method of minimizing detectability of a message transmitted by a frequency hopping algorithm, the method comprising:

establishing a nominal frequency suitable for transmitting the message during a dwell period according to the frequency hopping algorithm;

defining a predetermined frequency modulation pattern about the nominal frequency, the predetermined frequency modulation pattern being suitable to vary the nominal frequency during the dwell period;

dividing the dwell period into a plurality of sub-dwell periods, where each sub-dwell period has a nominal sub-frequency assigned thereto according to the predetermined frequency modulation pattern;

randomly ordering a sequence of the plurality of sub-dwell periods and the respective assigned nominal sub-frequencies during the dwell period;

for each randomly ordered nominal sub-frequency, varying the nominal sub-frequency during the respective sub-dwell period by one of increasing and decreasing the nominal sub-frequency; and

transmitting the message at frequencies by which each randomly ordered nominal sub-frequency has been increased or decreased.

Claim 10 (previously presented): The method of claim 9, further including:
increasing a time that the transmitted frequency transitions from one randomly ordered nominal sub-frequency to a next randomly ordered nominal sub-frequency.

⁸
Claim ~~11~~ (previously presented): The method of claim ~~8~~⁷, further including:
applying a band-limiting filter to each randomly ordered nominal sub-frequency.

⁹
Claim ~~12~~ (previously presented): The method of claim ~~8~~⁷, wherein the random ordering of the nominal sub-frequencies and the respective nominal sub-frequencies is performed using a pseudo-random number generator.

¹⁰
Claim ~~13~~ (original): The method of claim ~~8~~⁷, wherein the predetermined frequency modulation pattern is a frequency jitter pattern characterized by at least one of a frequency increase and a frequency decrease during the dwell period.

¹¹
Claim ~~14~~ (original): The method of claim ~~8~~⁷, wherein the predetermined frequency modulation pattern is a frequency chirp characterized by one of an increase in frequency and a decrease in frequency during the dwell period.

¹²
Claim ~~15~~ (currently amended): A method of electronically transmitting a message, comprising:

establishing a nominal transmission frequency;
establishing a dwell period;
defining a predetermined frequency modulation pattern about the nominal transmission frequency, the predetermined frequency modulation pattern being suitable to vary the nominal transmission frequency during the dwell period;

dividing the dwell period into a plurality of sub-dwell periods, where each sub-dwell period has a nominal sub-frequency assigned thereto according to the predetermined frequency modulation pattern;

randomly ordering a sequence of the plurality of sub-dwell periods and the respective assigned nominal sub-frequencies according to a pseudo-random algorithm; and

transmitting the message according to the randomly ordered ordering of the nominal sub-frequencies;

for each randomly ordered nominal sub-frequency, varying the nominal sub-frequency during the respective sub-dwell period by one of increasing and decreasing the nominal sub-frequency; and

transmitting the message at frequencies by which each randomly ordered nominal sub-frequency has been increased or decreased.

Claim 16 (canceled)

Claim 17 (currently amended): The method of claim ¹⁶15, further including: increasing a time that the transmitted frequency jumps from one randomly ordered nominal sub-frequency to a next randomly ordered nominal sub-frequency, wherein the increasing is accomplished by applying a band-limiting filter to the transmitted frequency.

Claim ¹³18¹²(original): The method of claim ¹²15, wherein the nominal transmission frequency is one of a plurality of frequency hops of a frequency hopping strategy, and wherein the dwell period is an amount of time the frequency hopping algorithm is configured to maintain the one of the plurality of frequency hops.

Claim ¹⁴18¹²(original): The method of claim ¹²15, wherein the predetermined frequency modulation pattern is a frequency chirp characterized by one of an increase in frequency and a decrease in frequency during the dwell period.